CHAPTER 13

EXPANSION AND UPGRADE OF EXISTING EMCS

1. UPGRADE GUIDELINES.

a. An existing EMCS can be upgraded to state-of-the-art UMCS to provide additional operational benefits of current technology.

b. Existing EMCS sensors and controls may be reused as part of the system upgrade if they utilize standard instrumentation signals (4-20 mAdc, for example) and are determined to be in good condition. The sensor and control wiring up to and including the data terminal cabinet should also be evaluated for reuse. If the sensors and controls are not in good condition or do not utilize standard instrumentation signals, they should be replaced as part of the upgrade.

c. It may be possible to reuse existing field interface devices and multiplexers if these devices are fully operational and can be easily interfaced to a new central/island station. Reuse of existing field interface devices and multiplexers requires that the government execute licensing agreements that allow third party personnel to use copies of technical data and computer software of the existing system for interfacing the new central/island station with existing equipment at the particular military installation specified in the agreement.

2. EXPANSION GUIDELINES.

a. A system may be expanded where the central station EMCS equipment has sufficient spare capacity to absorb the additional points and software in the expansion project. If the addition of points and operating requirements of the expanded system exceeds the capability of the existing control station EMCS equipment, it will usually be necessary to upgrade the equipment to state-of-the-art UMCS. Expansion of existing systems requires that the Government execute licensing agreements that allow third party personnel to use copies of technical data and computer software of the existing system for interfacing new equipment with the existing equipment at the particular military installation specified in the agreement.

b. Replacement of the existing system is required when no licensing agreement exists for the existing system, when the existing systems functional capabilities cannot be increased or when sole source expansion is not feasible.